UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,287	07/18/2002	Konstantinos Samaras	Samaras 7-5-7	1491

7590 03/28/2006	EXAMINER
Lucent Technologies Inc	DUONG, FRANK

ART UNIT	PAPER NUMBER
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DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>17 January 2006</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-14* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to communications dated 01/17/06. Claims 1-14

are pending in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in

view of Dupont (USP 5,974,106) (hereinafter "Dupont").

Regarding **claim 1**, in accordance with Klein reference entirety, Klein discloses a

method of transmitting in time slots in TDMA frames user data in burst (*see page 3,*

Figure 3; spread speech/data burst 1 or 2) of GSM format, each burst (*spread*

speech/data burst 1 or 2) comprising data portions (page 3, Figure 3; *Data symbols*)

separated by a training sequence (*Training sequence*), the method comprising

transmitting data of a first user in a first data portion *(Data symbols before Training*

sequence depicted in Figure 1) of a burst before the training sequence and data of a

second user in a second data portion *(Data symbols after Training sequence depicted in*

Figure 1) of the burst after the training sequence (*page 2, last paragraph, Klein*

discloses within one time slot of length 577 μs, more than one burst of corresponding

length can be transmitted. Theses bursts within the same time slot can be allocated to

different users. Moreover, page 4, Klein further discloses spread burst 1 or two, for

uplink, up to 8 different users per time slot). Klein fails to explicitly disclose the first data

portion of the burst is of a first user and the second data portion of the burst is of a

second user. However, such limitation lacks thereof from Klein reference is well known

and taught by Dupont.

In accordance with Dupont reference entirety, Dupont teaches a multirate

communications method allows for different data rates for each data unit on a channel,

including both data units from different mobile units and from the same mobile unit (see

'106, abstract), comprising, among other things, the limitation of first data portion of a

burst belongs to a first sender (col. 3, lines 17-18) and second data portion of a burst

belongs to a second sender (col. 3, lines 18-18) to provide multirate data

communications in wireless system that remedy most of the known problems ('106, col.

1, lines 56-58).

It would have been obvious to those skilled in the art, having Klein and Dupont references readily available at the time of the invention was made, to incorporate Dupont's teaching into Klein's or to modify Klein's method with Dupont's to arrive the claimed invention with a motivation to provide multirate data communications in wireless system that remedy most of the known problems ('106, col. 1, lines 56-58).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Klein in view of Dupont further discloses transmitting each data portion in a sub time-slot allocated to a different user (page 2, last paragraph, Klein discloses within one time slot of length 577 µs, more than one burst of corresponding length can be transmitted. These bursts within the same time slot can be allocated to different users).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales discussed above), Klein in view of Dupont further discloses transmitting user data in each time slot in a burst structure, user data being transmitted in each sub time slot in a corresponding burst structure (page 2, last paragraph, Klein discloses within one time slot of length 577 µs, more than one burst of corresponding length can be transmitted. Theses bursts within the same time slot can be allocated to different users and page 3, Figure 3, spread burst 1 or 2).

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales discussed above), Klein in view of Dupont further discloses in which a burst structure has n bits, the method including partitioning each time slot into m sub time slots (spread bursts), and transmitting user data in each sub time slot (spread burst) in a

corresponding burst structure n/m bits (*page 2, last paragraph, Klein discloses within
one time slot of length 577 μs, more than one burst of corresponding length can be
transmitted. Theses bursts within the same time slot can be allocated to different users
and page 3, Figure 3, spread burst 1 or 2*).

Regarding **claim 5**, in addition to features recited in base claim 3 (see rationales
discussed above), Klein in view of Dupont further discloses in which the user data
comprises speech (*see page 3, Figure 1, spread speech/data burst 1 or 2*).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales
discussed above), Klein in view of Dupont further discloses in which the TDMA system
is an EDGE packet switched network (*page 5, Fig. 4, Klein UMTS, which EDGE system
is evolved from*).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales
discussed above), Klein in view of Dupont further discloses in which the TDMA system
is a wireless system (*page 1, UMTS*), the method including encoding (Fig. 4; Channel
coding) in up-link data from p users such that each forms 1/p of an RLC/MAC block,
wherein the data from each user is encoded into a respective one of p sub-time-slots
(*page 5, Fig. 4, Klein discloses the mapping of layer 2 PDUs on layer 1 physical
channels. The recitation thereat inherent teaches the claimed limitation in a manner set
forth*).

Regarding **claim 8**, in addition to features recited in base claim 7 (see rationales
discussed above), Klein in view of Dupont further discloses transmitting the RLC/MAC

block over four TDMA frames (page 5, Fig. 4, Klein shows layer 2 PDUs mapped into four TDMA frames).

Regarding **claim 9**, in addition to features recited in base claim 1 (see rationales discussed above), Klein in view of Dupont further discloses including encoding the user data into an RLC/MAC block for transmission, and transmitting the RLC/MAC block in a sub-time-slot over a plurality of frames (page 5, Fig. 4, Klein shows layer 2 PDUs mapped into four TDMA frames).

Regarding **claim 10**, in addition to features recited in base claim 1 (see rationales discussed above), Klein in view of Dupont further discloses including encoding (Fig. 4; Channel coding) user data associated with at least two users is encoded into a single RLC/MAC block, and transmitting the portions of the RLC/MAC block associated with respective users in respective sub-time-slots (page 5, Fig. 4, Klein shows layer 2 PDUs mapped into four TDMA frames).

Regarding **claim 11**, in addition to features recited in base claim 1 (see rationales discussed above), Klein in view of Dupont further discloses including transmitting the user data in each time slot in a burst structure having n bits, portioning each time slot into m sub time slots, and transmitting user data in each sub time slot in a corresponding burst structure n/m bits (*see link adaptation disclosed on page 4 and slot structure depicted in Figure 3*).

Regarding **claim 12**, in addition to features recited in base claim 11 (see rationales discussed above), Klein in view of Dupont further discloses in which the user data comprises speech (*page 3, Figure 3, spread speech/data burst 1 or 2*).

Regarding **claim 13**, in addition to features recited in base claim 12 (see

rationales discussed above), Klein in view of Dupont further discloses in which the

TDMA system is a wireless system (*page 1 and thereinafter; UMTS*), the method

including encoding, in up-link data, from p users is encoded such that each forms 1/p of

an RLC/MAC block, wherein the data from each user is encoded into a respective one

of p sub-time-slots (page 4, Klein discloses link adaptation and parameters and page 5,

Fig. 4, Klein shows layer 2 PDUs mapped into four TDMA frames. *Thus, the recitation*

thereat inherent teaches the claimed limitation in a manner set forth).

Regarding **claim 14**, in addition to features recited in base claim 1 (see rationales

discussed above), Klein in view of Dupont further discloses including transmitting the

RLC/MAC block is transmitted over four TDMA frames (page 5, Fig. 4, Klein shows

layer 2 PDUs mapped into four TDMA frames*)*.

Response to Arguments

3. Applicants' arguments filed 01/17/06 have been fully considered but they are not

persuasive. Applicants' arguments will be addressed hereinbelow in the order in which

they appear in the response filed 01/17/06.

In the Remarks of the outstanding response, on pages 4-5, pertaining the

rejection of claims 1-14 rejected under 35 U.S.C. §103(a) for obviousness over Klein in

view of Dupont, Applicants argue *"[With] respect to claim 1, it is respectfully submitted*

that the Examiner is incorrect regarding the disclosure of col. 3 lines 17-18 of Dupont. It

does not disclose a first data portion of a burst belonging to a first sender and a second

data portion of the burst belong to a second sender. Interestingly, although Dupont

column 3, lines 17 to 18 refers to data units 210 and 220, these reference signs are not

indicated in Figure 2. Looking at Dupont column 3, lines 13 to 19, the text states:

….

It is respectfully submitted that to the reader this passage would most likely mean that

the first data unit 210 takes a first slot in a frame and a second data unit 210 takes a

second slot in the frame. It follows that Dupont does not clearly or unambiguously

disclose the principle of placing data units of two different users together in the same

TDMA transmission burst. Furthermore, Dupont does not disclose or suggest any detail

as to how that might be done. Furthermore, reading on through Dupont, its column 3

lines 19 to 22 reads:

…

This passage refers to a GPRS data burst. GPRS bursts are known to only serve one

user data per burst, a point on which supporting evidence can be provided should the

Examiner consider it necessary."

In response Examiner respectfully disagrees for the following rationales:

First, there is undeniably that Dupont does indeed disclose "a first sender 102

transmits first data units (e.g., data units 210) and a second sender 108 transmits

second data units (e.g., data units 220)" at col. 3, lines 17-19. The Examiner, as clearly

pointed out in the Office Action, equates such recitation to correspond to the claimed

limitations of *"transmitting data of a first user in a first data portion of a burst before the*

training sequence and data of a second user in a second data portion".

Second, it is also undeniably that references 210 and 220 weren't depicted or labeled in the Dupont reference of Fig. 2. However, such mistake in the Dupont does not render it from anticipating the claimed limitations.

Third, a skilled artisan, after reading the Dupont's disputed passage, would not come to a conclusion that "*this passage would most likely mean that the first data unit 210 takes a first slot in a frame and a second data unit 210 takes a second slot in the frame*" as asserted by the Applicants. The disputed passage does clearly mean "a first sender 102 transmits first data units (e.g., data units 210) and a second sender 108 transmits second data units (e.g., data units 220)" and the data units 210 and 220 refer to "encoded data" portions of Fig. 2. There is no doubt the Examiner's interpretation of Dupont's teaching is correct because further down in col. 3, lines 50-58, Dupont gives a brief description of how a data message adapted into packet data units. At col. 3, lines 33-34, Dupont also state the use of synchronization flag (Fig. 2; 202) to indicate the coding rate for its data unit and at lines 60-63, Dupont also states "[It] is significant that the present invention allows the rate of communication to vary in the same channel among all the users]. It is known that in TDMA, GSM or GPRS system, a channel refers to a slot. Thus, in order for the rate to vary in the same channel (slot), the encoded data in the burst of Fig. 2 must belong to two different users as recited in the Dupont's disputed passage.

As for the argument that Dupont's "*passage refers to a GPRS data burst*", Examiner's response is that Applicants are their own lexicographers. They can coin a certain term however they like. As far as Examiner's claim examining concern the term

GSM, GPRS, EGPRS and EDGE data bursts are the same unless the claim language

dictates them otherwise.

As for the argument of "Dupont does not disclose or suggest how data for

different users within a burst would be identify", Examiner's response is perhaps

Applicants refer to certain features that are disclosed in the present application but not

recited in the reject claims in making the contention that the Klein in view of Dupont

references fails to show certain feature of applicant's invention. Although the claims are

interpreted in light of the specification, limitations from the specification are not read into

the claims. See *In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).*

It is noted that Applicants attack references individually in a 103 rejection.

Applicants cannot show non-obviousness by attacking references individually where, as

here the rejection are based on combination of reference. *In re Keller, 208 USPQ 871*

(CCPA 1981).

Examiner believes an earnest attempt has been made in addressing all of the

Applicants' arguments. Perhaps, in a response to this Office Action, Applicants should

further review the specification of the instant application and amend the claims to

incorporate the different portions that deemed novel over the prior art of record. Due to

the response fails to place the instant application in a favorable condition for allowance

and the arguments are not persuasive, the rejection is maintained.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Frank Duong whose telephone number is 571-272-

3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

FRANK DUONG
PRIMARY EXAMINER

March 21, 2006